

Alaska Public Broadcasting, Inc.
Project Number 0117-DC-2004-15
January 1, 2010 – March 31, 2010
Quarterly Report

Alaska Rural Communications Service & Satellite Interconnection Revitalization

Project Summary: the ARCS revitalization project is almost finished. The project objective is the restoration of television broadcast programming to bush and rural communities by either repairing or replacing non operational equipment. This includes transmitters, antennas, satellite dishes, receiver/decoders, or towers.

Restoration of service: reliable ARCS service has been restored to more than 100 bush and rural communities where it had been completely off or seriously degraded.

Acquisition and refurbishment of equipment: refurbishing original transmitters saves approximately \$5000 per unit compared to purchase of new systems. We continue to cycle rebuilt units to the villages and bring the failed units back from those communities and send them off to the factory for rebuilding. We have rights to use some new receivers to decrease our response time when existing units fail in the villages.

Provision of timely customer support: with a system that includes more than 200 sites, technical staff is kept busy each day with myriad general service and trouble calls involving unique factors and circumstances to analyze and address. The range of work can run from a simple reset to a complex set of problems resulting in the complete failure of a village's local service.

Establishment of community partnerships: the majority of the service restoration work is attained through partnership, technical staff working with dedicated community volunteers. Some sites and projects require staff travel in order to deal with the extraordinary circumstances.

Phases two and three are complete: modern technology based systems were designed and implemented allowing for consolidation of a delivery system and central point of control for multiple content streams. A new method of controlling the ARCS program schedule is fully operational, allowing for remote operation. Equipment purchase and installation of the new State of Alaska satellite uplink system became operational on January 25, 2007.

The overall project is on schedule and within budget. We have not encountered any serious unanticipated problems or set backs requiring significant changes to the work scope. Restoration or upgrading of service presents a different challenge in each community. In partnership with our community liaisons, we continue to identify and solve these problems.

Activity detail: January 1, 2010 – March 31, 2010

- ARCS Technical Support handled 205 calls for assistance from 52 different bush and rural communities serviced by ARCS. As email has become more readily available in the villages we see on average around two dozen email contacts per month that in the past would have been phone calls.

- Bethel: The audio and video on the local receiver fell out of sync, a problem that sometimes occurs after a local power outage. Usually a reboot solves the problem, but this time the receiver went off frequency during the reboot process and needed to be manually retuned. Following a few troubleshooting sessions the receiver acquired signal and was back in good working order.
- We're working with the folks in Cold Bay to solve both receive and transmit issues. The transmitter acts like it is working well, so we replaced their satellite receiver when excessive digital breakup was reported by viewers. If the service doesn't improve, even though the meter readings look good, we'll go ahead and replace the transmitter with a known working unit from our stock of refurbished units.
- In Elim the local community members have located a replacement for the satellite dish that was destroyed several years ago. With a replacement receiver, LNB and cable, and lots of phone support, they have the dish aimed correctly and are once again receiving ARCS. Unfortunately, their local transmitter needs a rebuild and is not on a channel assignment that we have already in our stock of ready units. It is at the factory undergoing refurbishment, so it will be several more weeks before we can restore service.
- False Pass is working with the local phone company to acquire space and power in the building at the original dish site which was abandoned several years ago when a fire destroyed the communications building. The dish was unharmed but as no shelter was nearby they relocated to a site adjacent to the city offices. With the phone company placing their equipment near the old dish (which is much larger and stronger than the interim site) it will be possible to resume service at the old site.
- In Gambell, the local volunteer successfully reconstructed the feed arms and installed the equipment we sent, and service has been restored.
- Kotzebue ARCS service was restored when their dead receiver was replaced with a refurbished unit from our stock.
- In Nightmute, service went down following a storm with winds so heavy they ripped two steel panels on the dish antenna away from their ribs. At the time of the call winds were still gusting past 80 knots. After warning the local volunteer to stay inside and away from the dish, we requested pictures of the damage and will now work to send replacement panels and hardware to see if that may be sufficient. If not, a much larger project to repair or replace additional parts of the large dish antenna will be needed.
- Nome: ARCS is back on the air after their community recreation center worked with our office to install refurbished transmit equipment and reprogrammed the satellite receiver.
- Saint George is off the air with a satellite dish that has all but fallen over. The local community is working with their state legislators to try and find the financial resources to restore service. Saint George is one of the most remote and inaccessible sites in the state with limited air and barge service and capacity available.
- Meanwhile, in Scammon Bay, the community wants to relocate their ARCS site as the original building is all but abandoned. They are working with us to make sure they perform proper site selection and planning before committing to the move. The physical work will be performed by the community at their own expense, and when finished will put the ARCS equipment in the city office building where it will once again be safe, warm, dry and secure.
- In January ARCS participated in the first ever test of the live EAN code as part of the national EAS plan. ARCS has a long history of working with state and local officials in

distributing both real and simulated alerts. ARCS participates in the State of Alaska Emergency Alert System (EAS) Plan, maintains a membership role in the Alaska State Emergency Communications Committee (SECC), and is a designated Monitoring Assignment choice available to all Alaska broadcasters. As a year round 24/7 service the satellite and LPTV components of the ARCS signal provide access to emergency information to individual viewers as well as commercial and noncommercial broadcasters throughout Alaska. For the January EAN test, ARCS was included in planning sessions with FEMA, the State of Alaska Division of Emergency Services, and the Alaska Broadcasters Association. The ARCS office was one of several official monitoring points for the exercise, and video recordings of observations from the ARCS office during the test are available on our web blog at www.arcstv.blogspot.com. ARCS is one of three entities that distribute such alerts statewide, and I am pleased to report that ARCS was the only one of those three entities to successfully receive and relay the alert statewide.

Alaska Public Broadcasting Digital Distribution Network

Project Summary: project objective is interconnection of public broadcasting system facilities by means of the internet or constructed intranet. Upon completion of the network, delivery of content - programming, data and voice - and access to advanced networking options will be available to the system, enhancing service to local, regional and statewide audiences. The project is based on a network design developed under a previous federal grant from the US Department of Commerce. The project began in March 2004 and milestones include:

Review of network design and work scope: a thorough review of the original design and work scope was completed to determine if the selected equipment was still the best choice.

University of Alaska partnership agreement: entered into a multi year agreement with the UA statewide office of information technology for provision of connectivity between the hubs via the UA data backbone; and operational oversight of the network on a twenty-four hour basis. This oversight provides rapid reporting of problems so system maintenance and repair can be provided with minimal down time for network users.

Equipment bids, purchase and deployment: the core equipment for the hub and control locations was installed in August, 2005. Data network equipment for 26 stations has been installed. Competitive bidding yielded average discount of 31% saving \$465,000.

Activity detail: January 1, 2010 – March December 31, 2010

All sites have been installed. Current activity is occasional technical assistance being provided to personnel at various sites.